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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,205	03/09/2004	Paivi M. Ruuska	4208-4131US1	4202

27123   7590   07/07/2008

MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

EXAMINER
RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
2614	

NOTIFICATION DATE	DELIVERY MODE
07/07/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOPatentCommunications@Morganfinnegan.com
Shopkins@Morganfinnegan.com
jmedina@Morganfinnegan.com

PTOL-90A (Rev. 04/07)

	Application No.	**Applicant(s)**
Office Action Summary	10/797,205	RUUSKA ET AL.
	Examiner	**Art Unit**	
	Melur Ramakrishnaiah	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>*01 January 1939*</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,4,7-13,15-21,23-33 and 36-39* is/are rejected.

7) ☒ Claim(s) *2,3,5,6,14,22,34 and 35* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6-28-2005</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 4, 7-8, 9-12, 13, 15-16, 17-18, 18-20, 21, 23-26, 27-28, 29-33, 36, 38-

39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rune et al.

(EP1107522A1, hereinafter Rune) in view of Shorey et al. (US PAT: 6,807,159, filed 10-

25-2000, hereinafter Shorey).

Regarding claim 1, Rune discloses a method of wireless short range

communication comprising: transmitting a request message from one polling device and

polled device (fig. 7) transmitting a activity response message from the other of the

polliong device responsive to the activity request message, processing the activity

request message to derive a set of parameters associated with a period of activity for

the polling device and the polled device entering a activity mode on the set of accepted

parameters (paragraphs:0005; 0009, 0020-0042; 0052-0064; and figs 4, 7).

Regarding claim 13, Rune discloses an apparatus for implementing wireless

short range communication over a data transfer channel, comprising: a memory (in

Bluetooth Unit) for storing instructions, a processor (in Bluetooth Unit) that processes

the instructions to cause a polling device to transmit from the polling device a activity

request message to a polled device as shown in fig. 7; receive a activity response

message from the polled device, and conditionally enter a activity mode for a time

interval based on the activity messages (paragraphs:0005; 0009, 0020-0042; 0052-0064; and figs 4, 7).

Regarding claim 29, Rune discloses a method for short range wireless communication device implementing a pooling protocol, comprising: transmitting polling messages to at least one polled device according to a general polling mode and request one polled device enter a activity polling mode, receiving response message from at least one polled device, containing a response to the activity mode request, conditionally entering a activity polling mode, wherein during the activity polling mode either or both of the polling device and polled device refrain from accessing the data transfer channel for a time interval in accordance with the accepted set of activity polling mode parameters (paragraphs:0005; 0009, 0020-0042; 0052-0064; and figs 4, 7).

Regarding claim 38, Rune discloses an apparatus for short range wireless communication device implementing a polling method protocol comprising: a memory (in Bluetooth Unit) for storing instructions, a processor (in Bluetooth Unit) that processes the instructions to cause the communication device to: transmit polling messages to at least one polled device according to general polling mode and request to at least one polled device enter activity polling mode, receive a response message from at least one polled device, containing a response to the activity mode request, enter a activity polling mode wherein during activity polling mode either or both of the polling device and polled device refrain from accessing the data transfer channel for a time interval in accordance with the an accepted set of activity polling parameters (paragraphs:0005; 0009, 0020-0042; 0052-0064; and figs 4, 7).

Rune differs from claimed invention in that he does not specifically teach optimizing power consumption and low activity polling mode.

However, Shorey discloses methodology for managing power consumption in master driven time division duplex wireless network which teaches the following: optimizing power consumption and low activity polling mode (abstract; fig. 1; col. 7, line 39 – col. 8, line 17).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Rune's system to provide for the following: optimizing power consumption and low activity polling mode as this arrangement would facilitate power conservation in the communication devices in which power saving is critical as in Bluetooth communication devices.

Claim 21 is rejected on the same basis as claim 13.

Rune differs from claims 4, 7-8, in that he does not specifically teach the following: during processing of the low activity messages, the polling device and the polled device each transmit at least one additional message in deriving the set of accepted parameters , low activity mode is asymmetrical, wherein the polled devise and polling device enter activity modes of different time durations, low activity mode is asymmetrical, the polled device and polling device enter low activity modes of equal time durations.

However, Shorey teaches the following: during processing of the low activity messages, the polling device and the polled device each transmit at least one additional message in deriving the set of accepted parameters (col. 8 lines 15-28), low activity

mode is asymmetrical, wherein the polled devise and polling device enter activity modes

of different time durations, low activity mode is asymmetrical, the polled device and

polling device enter low activity modes of equal time durations (col. 7 lines 48-66).

Thus, it would have been obvious to one of ordinary skill in the art at the time

invention was made to modify Rune's system to provide for the following: during

processing of the low activity messages, the polling device and the polled device each

transmit at least one additional message in deriving the set of accepted parameters, low

activity mode is asymmetrical, wherein the polled devise and polling device enter

activity modes of different time durations, low activity mode is asymmetrical, the polled

device and polling device enter low activity modes of equal time durations as this

arrangement would facilitate further refine polling intervals to obtain power savings in

the communication devices as taught by Shorey.

Regarding claims 9-12, Rune further teaches the following:

communication devices implement a modified Bluetooth wireless communication

protocol (paragraphs: 0052-0054), Bluetooth master device assumes a polling device

role, wherein Bluetooth slave device assumes a polled device role (fig. 7),

communication devices implement a modified low-end radio wireless communication

protocol (paragraphs: 0052-0054).

Rune differs from claim 15-18 in that he does not specifically does not teach: low

activity response message accepts low activity parameters, low activity response

message rejects low activity parameters in the low activity request message, the low

activity response message includes proposed new low activity parameters, transmit an

updated low activity request message based on new low activity parameters from the polling device, and receive a new low activity response message accepting updated low activity request message.

However, Shorey teaches the following: low activity response message accepts low activity parameters, low activity response message rejects low activity parameters in the low activity request message (col. 7 lines 49-56), the low activity response message includes proposed new low activity parameters, transmit an updated low activity request message based on new low activity parameters from the polling device, and receive a new low activity response message accepting updated low activity request message (col. 12, line 41- col. 13, line 31).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Rune's system to provide for the following: low activity response message accepts low activity parameters, low activity response message rejects low activity parameters in the low activity request message, the low activity response message includes proposed new low activity parameters, transmit an updated low activity request message based on new low activity parameters from the polling device, and receive a new low activity response message accepting updated low activity request message as this arrangement would contribute to optimization in power consumption of the communication devices as taught by Shorey.

Claims 19-20 are rejected on the same basis as claims 9 and 12.

Claims 23-26 are rejected on the same basis as claims 15-18.

Claims 27-28 are rejected on the same basis as claims 9 and 12.

30-33, 35-36, 38-39

Rune differs from claims 30-33, 36, 39 in that he does not specifically teach the following: time interval is derived from a negotiation from the polling and polled devices, periodicity of polling message transmissions in the low activity polling mode is specified in the transmitted low activity mode request, the periodicity associated with transmitting the polling messages is defined by fixed time interval, wherein fixed time interval commences following the receipt of the response message, periodicity associated with transmitting the polling messages is defined by fixed time interval, wherein fixed time-interval commence at the end of a previous polling message, if no response message has been detected, transmitting a message modifying the low activity time interval after low activity data transfer has occurred.

However, Shorey teaches the following: time interval is derived from a negotiation from the polling and polled devices, periodicity of polling message transmissions in the low activity polling mode is specified in the transmitted low activity mode request, the periodicity associated with transmitting the polling messages is defined by fixed time interval, wherein fixed time interval commences following the receipt of the response message, periodicity associated with transmitting the polling messages is defined by fixed time interval, wherein fixed time-interval commence at the end of a previous polling message, if no response message has been detected, transmitting a message modifying the low activity time interval after low activity data transfer has occurred (fig. 6, col. 12, line 41 – col. 13, line 27).

Thus, it would have been obvious to one of ordinary skill in the art at the time

invention was made to modify Rune's system to provide for the following: time interval is

derived from a negotiation from the polling and polled devices, periodicity of polling

message transmissions in the low activity polling mode is specified in the transmitted

low activity mode request, the periodicity associated with transmitting the polling

messages is defined by fixed time interval, wherein fixed time interval commences

following the receipt of the response message, periodicity associated with transmitting

the polling messages is defined by fixed time interval, wherein fixed time-interval

commence at the end of a previous polling message, if no response message has been

detected, transmitting a message modifying the low activity time interval after low

activity data transfer has occurred as this arrangement would contribute to optimization

in power consumption of the communication devices as taught by Shorey.

3.   Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rune in

view of Shorey as applied to claim 29 above, and further in view of Tang et al. (US PAT:

5,771,235, hereinafter Tang).

The combination differs from claim 37 on that he does not teach the following:

conducting carrier sensing multiple access with collision avoidance for determining that

there are no transmissions conflicts to prior to transmitting polling messages.

However, Tang discloses a CSMA/CD repeater which teaches the following:

conducting carrier sensing multiple access with collision avoidance for determining that

there are no transmissions conflicts to prior to transmitting polling messages (abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: conducting carrier sensing multiple access with collision avoidance for determining that there are no transmissions conflicts to prior to transmitting polling messages as this arrangement would provide for anther well known protocol for communication devices as taught by Tang.

4.   Claims 2-3, 5-6, 14, 22, 34-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (571)272-8098. The examiner can normally be reached on 9 Hr schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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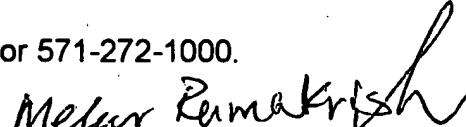
Melur Ramakrishnaiah
Primary Examiner
Art Unit 2614